

# #STEM up the classroom with the Genuino 101 board and the Science Journal App

One of the most exciting things about working with microcontrollers like the Genuino 101 board is the data you are able to collect. In combination with the **Science Journal App** the Genuino 101 board creates many opportunities for taking the STEM classroom to a whole new level with **data collection and analysis**. This guide will get you connected, see the links at the bottom to explore the possibilities! Please note this is a **level 3 guide** and assumes you have mastered basic Genuino 101 board connectivity, and have completed a number of experiments with either the Sparkfun Inventors Kit (<http://bit.ly/101Spark>) or Seed Studio Grove Kit for Arduino\* (<http://bit.ly/101Plug-n-Play>).

## Quick Check

1. You will need an Arduino board such as a Genuino 101 board.
2. You will need to have installed the Arduino IDE, visit <http://bit.ly/101-101> for all the instructions.
3. You will also need an Android tablet or phone with the 'Science Journal' app installed.

## STEP 01



## Prepare your Genuino 101 board for the Science Journal App

1. Visit <http://bit.ly/101SJApp>
2. Click on 'Clone or Download' and then 'Download Zip.'
3. The file will download to your **downloads** folder. **Unzip** the file.
4. You will now have a folder called '**Science Journal Arduino Master**'
5. Open the folder and then click on '**src**' >> '**arduino101**' >> '**science-journal-arduino**'
6. Copy the contents of the folder and paste in to the '**libraries**' folder within the '**Arduino**' folder on your computer. (Usually located in '**documents**' )

## STEP 02

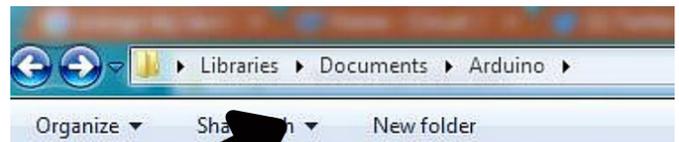


## Install the NanoPb Libraries

The next step is to install the **NanoPub** libraries.

1. Visit <http://bit.ly/NanoPb>
2. Click on 'Clone or Download' and then 'Download Zip.'
3. The file will download to your **downloads** folder.
4. Open the **Arduino IDE**
5. Click on '**sketch**' >> '**Include library**' >> '**Add .ZIP Library**' and locate the file '**nanopb-master.zip**' in your '**downloads**' folder. Click '**open**' to install.

## STEP 03



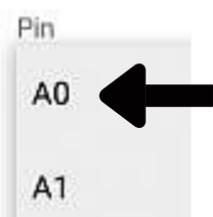
## Set up your Genuino 101 board

1. Within the Arduino IDE click '**open**' and navigate to the sketch called '**science-journal-arduino.ino**' (It will be located in your **Downloads** folder '**src**' >> '**arduino101**' >> '**science-journal-arduino**'
2. Connect your Genuino 101 board and click '**upload**' to load the sketch.
3. Connect a **sensor** to the port '**A0**' on your board. This should be easy if you have either the Seed Studio Grove starter kit or the Sparkfun Inventors Kit.

## STEP 04



Device settings



## STEP 05

## Open the App and connect

Now on your Android device:

1. Open the '**Science Journal**' app
2. Click on the '**device**' icon (see right) and select your Genuino 101 board by clicking on the object beginning with **Sci** e.g. '**Sci1234**'
3. Now you can configure which sensor you wish to monitor by selecting '**custom**' in the drop down box under '**sensor**'.
4. The '**pin**' menu should appear.
5. Select the pin on your Genuino 101 board you wish to monitor, '**A0**' in our instance.
6. Select '**back**' and now watch the output of your sensor on the screen!



For more information on the recording, export and monitoring capabilities of the Science Journal App visit: <http://bit.ly/ScienceJournal>

For more information on connecting your Genuino 101 board and conducting further experiments with the Science Journal App visit: <http://bit.ly/SJSpark>

This guide was produced with information from the two sites identified.